plurality of windings disposed in said stator slots, said stator core disposed around said rotor, said stator core having first and second stator ends; [and]

a first oil spray nozzle retainer disposed proximate said first stator end and a second oil spray nozzle retainer disposed proximate said second stator end, each said first and second oil spray nozzle retainers having a plurality of nozzles disposed therein, said nozzles in flow communication with a supply of cooling oil for spraying cooling oil onto said first and second stator end[.]; and

A1 Cond.

wherein said rotor core includes a plurality of rotor slots having a conducting metal disposed therein, said rotor further having a rotor slot coating deposited onto a rotor slot surface of each said rotor slot, said coating being disposed between said conducting metal and said rotor slot surface prior to said conducting metal being disposed in each said rotor slot during a die casting process to protect the laminations of said rotor core ~~from the adverse effects of said die casting process.~~

A2 B

7 ~~10~~. (Amended) The motor of claim [9] 1 wherein said rotor slot coating comprises a electrical insulating ceramic-based material.

A3 B

8 ~~15~~. (Amended) The motor of claim [12] 1, wherein said cast conducting metal is copper.

A3 Cond. B

9 ~~21~~. (Amended) The motor of claim [12] 1, wherein said cast conducting metal is aluminum.

Add new claims 22-55 as follows.

B

--4 ~~22~~. The motor of claim 2 ~~10~~ wherein said rotor slot electrical insulating coating is comprised of silicon and aluminum.

B

5 ~~23~~. The motor of claim 2 ~~10~~ wherein said rotor slot electrical insulating coating is comprised of about 94.5 percent silicon and about 5.5 percent aluminum.

A4 B

6 ~~24~~. The motor of claim 2 ~~10~~ wherein said rotor slot electrical insulating coating comprises a composition of silicon, aluminum and titanium.

7 ~~25~~. The motor of claim 6 ~~24~~ wherein the proportion of titanium in said composition is about 2 to 3 percent.

Dub C2

10 ~~26. An electric motor for a vehicle, comprising:~~

a motor casing having first and second casing ends;

a rotor having a laminated rotor core including a plurality of laminations and intervening insulation and a rotor shaft extending through said rotor core, said rotor shaft rotatably supported by said motor casing;

a laminated stator core including a plurality of laminations and intervening insulation having a plurality of stator slots

formed therein and a plurality of windings disposed in said stator slots, said stator core being disposed around said rotor; and

wherein said rotor core includes a set of rotor slots having a cast conducting metal disposed therein by a die casting process and having a rotor slot electrical insulating coating deposited on a surface of said rotor slots prior to said die casting process to protect the laminations and insulation from the adverse effects of the die casting process including the relatively high temperature necessary to maintain the cast conducting metal in a molten state during said die casting process as well as the effects of oxidation and over heating of said rotor ~~core which results in damage to the intervening insulation.~~

B B B A4 cont.

B ~~27~~ 11. The motor of claim ~~26~~ 10 wherein said rotor slot electrical insulating coating comprises a ceramic-based material having a melting point which is greater than the melting point of said conducting metal.

B ~~28~~ 12. The motor of claim ~~27~~ 11 wherein said cast conducting metal is comprised of copper or aluminum.

~~29~~ 13. The motor of claim ~~27~~ 11 wherein said ceramic-based material is silicon or germanium.

B ~~30~~ 14. The motor of claim ~~27~~ 11 wherein said rotor slot electrical insulating coating is comprised of silicon and aluminum.

15 ~~22~~. The motor of claim 11 ~~21~~ wherein said coating is comprised of about 94.5 percent silicon and of about 5.5 percent aluminum.

16 ~~23~~. The motor of claim 11 ~~21~~ wherein said coating is comprised of a composition of silicon, aluminum, and titanium.

B

17 ~~23~~. The motor of claim 16 ~~32~~ ~~24~~ wherein the proportion of titanium in said composition is between 2 and 3 percent.

A4 cont.

18 ~~24~~. The motor of claim 11 ~~21~~ wherein said melting point of said ceramic based material is at least 2900° F.

19 ~~25~~. The motor of claim 11 ~~21~~ wherein ceramic based material has a dielectric strength of at least 300V/mils.

20 ~~26~~. The motor of claim 10 ~~26~~ and wherein said stator core includes a set of stator slots having a stator slot electrical insulating coating on a surface of said rotor slots like said rotor slots and having cast conducting metal formed over said stator slot electrical insulating coating.

B

B

Dub B2

21 ~~27~~. ~~The motor of claim~~ 20 ~~36 wherein said rotor slot coating and said stator slot coating are comprised of the same coating material.~~

B

22 ~~28~~. The motor of claim 21 ~~37~~ wherein said electrical insulating coating material

comprises a ceramic-based material.

23 ~~35~~. The motor of claim 22 ~~36~~ wherein said ceramic based material comprises silicon or germanium.

B 24 ~~40~~. The motor of claim 21 ~~37~~ wherein said electrical insulating coating material comprises a composition of silicon and aluminum.

B A4 Cont. 25 ~~41~~. The motor of claim 21 ~~37~~ wherein said electrical insulating coating material comprises a composition of about 94.5 percent silicon and of about 5.5 percent aluminum.

B 26 ~~42~~. The motor of claim 21 ~~37~~ wherein said electrical insulating coating material is comprised of a composition of silicon, aluminum and titanium.

27 ~~43~~. The motor of claim 26 ~~42~~ wherein the proportion of titanium in said composition is between 2 and 3 percent.

~~44. In a method of fabricating an electric motor for an electric vehicle including a rotor and a stator and wherein at least the rotor is comprised of a plurality of mutually insulated laminations and includes a plurality of rotor slots filled with conducting metal in a molten state during a die casting process, the improvement comprising the step of:~~

~~coating the surface of the rotor slots with a ceramic-based~~

material having a melting point greater than that of said conducting metal prior to depositing said conducting metal in a molten state into the rotor slots during said die casting process to protect the laminations and intervening insulation from the adverse effects of the die casting process.

45. The method of claim 44 wherein said ceramic-based material is silicon or germanium.

A4 cont.

46. The method of claim 44 wherein said ceramic-based material is a composition of silicon and aluminum.

47. The method of claim 44 wherein said ceramic-based material is a composition of about 94.5 percent silicon and of about 5.5 percent aluminum.

B

48. The method of claim 44 wherein said ceramic-based material is a composition of silicon, aluminum and titanium.

49. The method of claim 48 wherein the proportion of titanium in said composition is between 2 and 3 percent.

50. The method of claim 44 wherein the stator is also comprised of a plurality of mutually insulated laminations and includes a plurality of stator slots filled with conducting metal,

and including the additional step of:

coating a surface of the stator slots with the same ceramic-based material as said rotor slots.

51. The method of claim 50 wherein said ceramic-based material is silicon or germanium.

A4 cond.

52. The method of claim 50 wherein said ceramic-based material is a composition of silicon and aluminum.

B

53. The method of claim 50 wherein said ceramic-based material is a composition of about 94.5 percent silicon and of about 5.5 percent aluminum.

54. The method of claim 50 wherein said ceramic-based material is a composition of silicon, aluminum and titanium.

55. The method of claim 54 wherein the proportion of titanium ~~in said composition is between 2 and 3 percent.~~

REMARKS

Claims 1, 10, 11, 13, 14 and 22-55 are now present in the application. Claims 2-9, 12 and 15-21 are now cancelled and new claims 22-55 are now presented for examination. Claims 1, 26 and 44 are independent claims.